**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application. Claims 20-23 have been canceled without prejudice.

1. (Previously Presented): An apparatus, comprising:

a chromatic dispersion compensation module including

a beam spatial orientation device to separate an optical signal into a first polarized light signal and a second polarized light signal, the second polarized light signal being the orthogonal polarization of the first polarized light signal;

a wavelength-dependent delay path coupled to the beam spatial orientation device, wherein the wavelength-dependent delay path includes three or more tunable cascaded resonator cavities and each resonator cavity is tuned to a different center wavelength to produce a distortion of the optical signal due to variation in the chromatic dispersion across the passband that incurs a Q-penalty of less than one decibel; and

a polarization rotator coupled to the wavelength-dependent delay path such that the first polarized light signal reflects into the wavelength-dependent delay path in substantially the opposite direction of the second polarized light signal.

2. (Original): The apparatus of claim 1, further comprising:

a radiation paralleling device coupled to an input output terminal; the radiation paralleling device also coupled to the beam spatial orientation device.

3. (Previously Presented): The apparatus of claim 1, wherein the first polarized light signal is a transverse electric wave.

4. (Previously Presented): The apparatus of claim 1, wherein the first polarized light signal is a transverse magnetic wave.

5. (Previously Presented): The apparatus of claim 1, wherein the beam spatial orientation device is a birefringent walkoff crystal.

6. (Previously Presented): The apparatus of claim 1, wherein the beam spatial orientation device is a polarization beam splitting prism.

7. (Canceled)

8. (Previously Presented): The apparatus of claim 1, wherein each tunable cascaded resonator connects to a temperature control device.

9. (Original): The apparatus of claim 1, wherein the wavelength-dependent delay path further comprises a fiber Bragg grating.

10. (Original): The apparatus of claim 1, wherein the wavelength-dependent delay path further comprises a multilayer reflector that creates chromatic dispersion.

11. (Previously Presented): The apparatus of claim 1, wherein one or more of the tunable cascaded resonator cavities are tuned to a center wavelength by solely changing the temperature of that resonator cavity.

12. (Canceled)

13. (Previously Presented): The apparatus of claim 1, wherein the polarization rotator is a Faraday rotating mirror.

14. (Previously Presented): The apparatus of claim 1, wherein the polarization rotator is a quarter wave plate coupled to a resonator cavity.

15. (Original): The apparatus of claim 14, wherein the wavelength-dependent delay path includes at least two or more polarization rotators to facilitate the first polarized light signal reflecting through the wavelength-dependent delay path in substantially the opposite direction of the second polarized light signal, and each polarization rotator consisting of the quarter wave plate coupled to the resonator cavity.

16. (Previously Presented): The apparatus of claim 2, wherein the radiation paralleling device is a collimator.

17. (Previously Presented): A method, comprising:

separating an optical signal into a first polarized light signal having a first polarization and a second polarized light signal having a second polarization, the second polarized light signal being the orthogonal polarization of the first polarized signal;

routing the first polarized light signal through a wavelength-dependent delay path in a first direction, and the second polarized light signal propagates through the wavelength-dependent delay path in a second direction substantially opposite the first direction; and

routing the first polarized light signal through a series of three or more cascaded resonator cavities, wherein each resonator cavity is tuned to a different center wavelength to produce a distortion of the optical signal due to variation in the chromatic dispersion across the passband that incurs a Q-penalty of less than one decibel.

18. (Original): The method of claim 17, further comprising:

collimating a light wave in an optical signal to possess the same angle of incidence.

19. (Original): The method of claim 17, further comprising:

changing the resonant center wavelength of one or more segments in the wavelength-dependent delay path by adjusting the temperature in that segment.

20-23. (Canceled):

24. (Previously Presented): An apparatus, comprising:

means for separating an optical signal into a first polarized light signal having a first polarization and a second polarized light signal having a second polarization, the second polarized light signal being the orthogonal polarization of the first polarized indication;

means for routing the first polarized light signal through a wavelength-dependent delay path in a first direction and routing the second polarized light signal through the wavelength-dependent delay path in a second direction substantially opposite the first direction; and

means for routing the first polarized light signal through a series of three or more cascaded resonator cavities, wherein each resonator cavity is tuned to a different center wavelength to produce a distortion of the optical signal due to variation in the chromatic dispersion across the passband that incurs a Q-penalty of less than one decibel.

25. (Original): The apparatus of claim 24 further comprising:

means for collimating a light wave in an optical signal to possess the same angle of incidence.

26. (Canceled)

27. (Previously Presented): An optic transmission system, comprising:

a transmitter;

a receiver;

one or more chromatic dispersion compensation modules coupled between the transmitter and the receiver, each chromatic dispersion compensation module including

a beam spatial orientation device to separate an optical signal into a first polarized light signal and a second polarized light signal, the second polarized light signal being the opposite polarization of the first polarized signal;

a wavelength-dependent delay path coupled to the beam spatial orientation device, wherein the wavelength-dependent delay path includes three or more tunable cascaded resonator cavities and each resonator cavity is tuned to a different center wavelength to produce a distortion of the optical signal due to variation in the chromatic dispersion across the passband that incurs a Q-penalty of less than one decibel; and

a polarization rotator coupled to the wavelength-dependent delay path such that the first polarized light signal reflects into the wavelength-dependent delay path in substantially the opposite direction of the second polarized light signal.

28. (Original): The system of claim 27, further comprising:

an input-output circulator coupled to the chromatic dispersion compensation module.

29. (Previously Presented): The system of claim 27, wherein the polarization rotator is a quarter wave plate coupled to a resonator cavity.

30. (Previously Presented): The system of claim 29, wherein the wavelength-dependent delay path includes at least two or more polarization rotators to facilitate the first polarized light signal reflecting through the wavelength-dependent delay path in substantially the opposite direction of the second polarized light signal, and each polarization rotator consisting of the quarter wave plate coupled to the resonator cavity.

31. (Previously Presented): The system of claim 27, wherein the polarization rotator is a forty-five degree Faraday rotator coupled to a resonator cavity.

32. (Previously Presented): A chromatic dispersion compensation module, comprising:

a collimator;

a first beam spatial orientation device coupled to the collimator;

a first polarization rotator coupled to the first beam spatial orientation device;

a first resonator cavity coupled to the first beam spatial orientation device;

a first temperature control device coupled to the first resonator cavity;

a second beam spatial orientation device;

a second polarization rotator coupled to the second beam spatial orientation device;

a second resonator cavity coupled to the second beam spatial orientation device;

a second temperature control device coupled to the second resonator cavity;

a third beam spatial orientation device coupled to a third resonator cavity; and

a third temperature control device coupled to the third resonator cavity, wherein each resonator cavity is tuned to a different center wavelength to produce an approximately linear dispersion compensation across the entire passband that produces a Q-penalty of less than one decibel in an optical signal due to variation in the chromatic dispersion compensation.

33. (Previously Presented): The apparatus of claim 32, further comprising:

a fourth beam spatial orientation device coupled to the first polarization rotator and the second polarization rotator.

34. (Previously Presented): The apparatus of claim 33, wherein the first polarization rotator is a forty-five degree Faraday rotator coupled to a half wave plate.

35. (Original): The apparatus of 33, wherein the first polarization rotator couples to the first beam spatial orientation device and the second polarization rotator couples to the second beam spatial orientation device such that a first polarized light signal and a second polarized light signal having the orthogonal polarization of the first polarized light signal travel substantially similar paths through the chromatic dispersion compensation module.

36. (Canceled)

37. (Previously Presented): An apparatus, comprising:

a chromatic dispersion compensation module including

a beam spatial orientation device to separate an optical signal into a first polarized light signal and a second polarized light signal, the second polarized light signal being the orthogonal polarization of the first polarized light signal;

a wavelength-dependent delay path coupled to the beam spatial orientation device, wherein the wavelength-dependent delay path includes a fiber Bragg grating; and

a polarization rotator coupled to the wavelength-dependent delay path such that the first polarized light signal reflects into the wavelength-dependent delay path in substantially the opposite direction of the second polarized light signal.